

Children's Newspaper

The CHILDREN'S NEWSPAPER

AND CHILDREN'S PICTORIAL

The Story of the World Today for the Men and Women of Tomorrow

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EDITED BY ARTHUR MEE

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VON KLUCK HAS A WORD TO SAY

STREET ARAB'S FARE- WELL TO HIS STEED

LONDON LOSES ITS MOST STIRRING SIGHT

Dramatic Gallop of the Fire Horse Through the Capital

MOTOR AGE AT THE FIRE BRIGADE

By Our Natural Historian

There is a pang of regret in every London heart, for the last of the most stirring pageants in the great capital has reached its goal: its steeds have run their final course. London has dismissed the last of its fire-horses from their faithful service.

The motor has completely triumphed, and Nora and Lucy, the two splendid mares whose flying hoofs daily beat out on the ringing roads the song of animal speed and strength, having outlasted all the 300 of their splendid kindred, retire from the force and leave the route to motors.

Gallop Through the City

With their departure every street arab loses his steed. He was proud of them and stirred by them, as were we all. These gallant horses were public property, proud, sagacious creatures, owned by the ratepayers, so that their loss is personal to us all.

They were monarchs of the highway. Day or night, in all hours and weathers, on the open road or in the thickest traffic, they had the right of way. The King in his golden coach must proceed at a leisurely amble, but those fleet beauties, never out except to save life and property, made their way at a hard gallop anywhere, everywhere, the pride of all who loved horses, the delight of all whose pulse quickened at the spectacle of courage, power, and swiftness raised to its highest living expression.

The Rush to the Fire

The watchman on the tower of Jezreel, seeing a chariot coming apace over the plain, cried: "The driving is like the driving of Jehu, for he driveth furiously." Our anxious London watchmen, scanning the streets afar and seeing men driving furiously, always knew that it was the fire-horses racing to redeem human life from burning and property from destruction. Between the firemen and their horses there existed a partnership of understanding and common heroism nowhere excelled.

Horses have an instinctive horror of fire and sudden noises, but Nora and Lucy at the sound of the fire alarm rushed to their places with excited ardour, and whirled the steam manual or the fire-escape through the streets as if they were feathers. With what fierce delight they attacked the hills, with what thrilling joy they stretched themselves for a delirious gallop on the level, sleigh-bells jingling on their proud, tense necks, machine-gun clatter from their thundering feet, sparks flying from

The Sight We Shall Not See Again



This stirring sight has passed from the streets of London, the last of the fire-horses having been retired from the Metropolitan Fire Brigade, in favour of the motor. This picture is from the fine painting by Mr. C. E. Stewart, now in possession of the Essex and Suffolk Fire Office

the engine's funnel and from their iron-shod hoofs; a roaring chorus of "Hi! hi! hi!" from the urgent firemen; light, like a blinding sunset, flashing back from the brass of engine and helmets, steam rising from water in the boiler to mingle with steam from the heaving flanks of the wildly coursing horses!

It might be a scurry of furlongs, it might be a grim gallop of miles, but never a fire-horse hung back from the collar; never a fire-horse failed to rise on its toes at a hill. Beautiful creatures, clever as cats, fleet as greyhounds, strong as lesser elephants, they were bred to the incomparable ordeal of life-saving; and they went right up to the fire, amid falling masonry and bursting retorts, unafraid, conquerors of instincts which kept them safe for millions of years before they joined forces with man.

They have run their race right nobly, and now they yield their place to the all-conquering motor. With them vanishes the most enthralling drama of picturesque movement that London had to show. We shall miss the magic of

their beauty, swiftness, and disciplined fearlessness, and we hope that the new masters of Lucy and Nora, remembering the glorious record of the dauntless pair, will recall the refrain of a kindly old song, "Whoa, mare! Whoa, mare! You've earned your little bit of corn!" E. A. B.

THE BARGE-HORSE GOING

In the country, as in the town, the horses are passing. The barge-horse is disappearing from the towing-path.

Quite a number of differently designed motor-haulers, some of them little bigger than a motor bicycle, have been built to do the work of the horse, and their extra power, derived, of course, from petrol or alcohol, enables them to haul two or three barges where a powerful horse would only tow one.

One of the most interesting of these motor-haulers can travel along rough and irregular river banks where there is no towing-path.

Another hauler is an aerial one, worked by electricity from a still higher aerial.

AMERICA THANKS GOD

COUNTRY'S GRATITUDE FOR ITS PROSPERITY

Nation the Willing Instrument of Providence

HISTORIC DOCUMENT

America kept November 24 as Thanksgiving Day, and it is a great pleasure to give these passages from the noble proclamation signed by President Harding and Mr. C. E. Hughes, Secretary of State, calling upon the people, "at their hearth-sides and their altars," to give thanks for "the Divine fortune showered so generously upon the nation."

The following are the chief paragraphs in this historic document, which it is a great inspiration to read in these days.

Foremost among our blessings is the return of peace and the approach to normal ways again. The year has brought us again into relations of amity with all nations, after a long period of struggle and turbulence.

In thankfulness, therefore, we may well unite in the hope that Providence will vouchsafe approval of the things we have done, the aims which have guided us, the aspirations which have inspired us.

Privilege of Service

We shall be prospered as we shall deserve prosperity, seeking not alone for the material things, but for those of the spirit as well, earnestly trying to help others, asking before all else the privilege of service.

As we render thanks anew for the exaltation which came to us, we may fittingly petition that moderation and wisdom shall be granted to rest upon all who are in authority in the tasks they must discharge. Their hands will be steadied, their purposes strengthened in answer to our prayers.

Ours has been a favoured nation in the bounty which God has bestowed upon it. The great trial of humanity, though, indeed, we bore our part as well as we were able, left us comparatively little scarred. It is for us to recognise that we have been thus favoured, and when we gather at our altars to offer up thanks, we will do well to pledge, in humility and all sincerity, our purpose to prove deserving.

A Great Resolve

We have been raised up and preserved in national power and consequence as part of a plan whose wisdom we cannot question. Thus believing, we can do no less than hold our nation the willing instrument of the Providence which has so wonderfully favoured us.

Opportunity for very great service awaits us, if we shall prove equal to it. Let our prayers be raised for direction in the right paths. Under God, our responsibility is great: to our own first, to all men afterward, to all mankind in God's own justice.

THE ROAD GERMANY IS GOING HER GREAT AMBITION

Education as the Key to
Prosperity and Power

STATESMAN'S MESSAGE TO BRITISH SCHOOLS

The other night a special correspondent of the C.N. sat talking with a British statesman who, out of chaos, fashioned the immortal army which made it possible for the Allies to win the war, and to which General von Kluck pays the wonderful tribute on another page.

I found myself (our correspondent writes) hoping that the present rulers of the nation would listen as willingly and as gladly to his counsel as the generals of the British Army listened to him in 1908. For this man, Lord Haldane, is one who looks ahead, and does not speak until he has thought.

He has lately been to Germany, and I called upon him to learn the position of that country, particularly as it is likely to affect Great Britain.

New Spirit in Germany

"Germany," he said, "is a greater menace to us now than in 1914. She is no longer thinking in armies. She does not think of making herself feared, but of making herself admired. She wants to be a better country than any other. She means to make herself the greatest country in Europe. And she is choosing the right road to achieve this ambition."

"What road is that?"

"The road of education."

"But surely she has always been on that road?"

"Yes, but in another spirit. I found that Germans are returning with the greatest admiration, perhaps with some repentance, to Goethe. They perceive that the spiritual alone is the real. Instead of wishing to make themselves physically and boastfully a Great Power they are aiming to make themselves spiritually and intellectually the greatest of all nations. All that was excellent in their military system—the discipline, the devotion, the untiring hard work—is passing over into this new ambition. All that was bad is ceasing to count."

When Boys Leave School

"Do you think the German boy goes to school with clearer notions of the value of education than the English boy?"

"No."

"Or with greater ambition to get on?"

"No."

"Then what makes the difference?"

"The German boy is under a stricter discipline than the English boy. It is not so easy for him to play the fool. But he is much the same as boys in this country. The grind is no more congenial to him than to our boys. The difference comes when he leaves school. He leaves better equipped than our boys to appreciate the value of education, and finds himself in an atmosphere of education—everyone about him interested in the improvement of the mind and convinced that only intelligence can rule the world."

University Brought to Town

Happily for us, something of the same spirit is manifesting itself here. Lord Haldane is convinced that the British democracy is awaking to the value of education. He addresses meetings all over the country on the subject of adult education, and everywhere the meetings are crowded with eager working people.

"The object of the British Institute of Adult Education," he says, "is to bring the university to the town, and to permeate all our cities with the university spirit. For one thing, it provides a new profession for our scholars. Men who graduate at the universities will soon find themselves units in a greater teaching profession than this country has yet known—a profession which teaches men and women who have left school, the whole army of British democracy."

Continued in the next column

PEACE TREATY BEES Train with 500 Million Passengers

WHY 23,000 SWARMS OF BEES HAVE CHANGED THEIR COUNTRY

A railway train not long ago left Hanover for France and Belgium with one of the strangest companies of passengers ever seen on a railway.

Not only were the passengers unusual, but there were about 500 million of them on the one train—as many as all the passengers on all the trains of the United Kingdom in four months.

These passengers were bees, and there were 23,000 swarms, sent by the German Government to France and Belgium as part of the War Indemnity.

Bees were not specially mentioned in the Peace Treaty, as were horses, cows, and pigs, but they were named in a list prepared within 60 days of the Treaty coming into force, setting forth a number of articles to be restored to the Allies; and it was in accordance with this that this train-load of bees was sent.

America the Biggest Beekeeper

Officials on both sides of the Rhine were asking what would happen if by any chance the train met with an accident! The work of rescuing the bees would certainly not have been an easy one. There must have been about forty tons of them.

A second train-load of bees will leave Germany early next year. Before the war France had about a million hives and Belgium a quarter of a million, but these numbers were sadly reduced during the years of conflict. Germany had about two million hives, and Austria over a million and a half.

The United States is the biggest bee country in the world, possessing nearly three million hives. See *World Map*

GRAMOPHONE NOISES

Something New That May Stop Them

An interesting invention has been the cause of several new factories being started in France—the pulverising of cotton and wool.

It is difficult to think of cotton as other than thread wound on a reel, but finely-powdered cotton is being used in the manufacture of gramophone records, electrical insulators, and of moulding material for decorative purposes.

Its effect on the quality of gramophone records may prove of great value, as it is said to do away with the vibrations causing the twang inseparable from music reproduction at present.

Continued from the previous column

"These teachers from the university will be missionaries of the higher life. They will bring the spirit of Oxford to the industrial cities, and that spirit will make an end of the slums and the human degradation which disgrace them. Not only this, but it gives a new hope to the world."

"Until we get an intelligent democracy our position is dangerous. Our commerce is threatened; our political institutions are at the mercy of passion. We must be far more alert intellectually if we are to keep our place. We must organise. We must be in earnest."

I asked him if he had a message for the school children of this country.

"Tell them," he replied, "that education opens to them all the highest joys, all the noblest consolations. Tell them to think of their school life as the opening of a door to all the pleasures and delights of education, and education ends only with the grave."

I ventured to say, thinking of the stars, "Perhaps not even there."

CREATURE THAT EATS UP HOUSES

THE DRY ROT FUNGUS

Infinite Mischief of an Invisible
Enemy

THE DISAPPEARING FORESTS

By Our Economic Correspondent

An Empire Forestry Association has lately come into being at the Guildhall, London.

Civilised communities consume an enormous amount of wood. It is used so freely in building, on railways, and roadways, for paper such as these words are printed on, for props in mines, and for many other purposes, that a forest of trees disappears every year.

Britain herself, through neglect of forestry, has so little native timber that if we could not get oversea supplies all our trees would soon be used up.

It is very important, therefore, that we should give great attention to tree-planting and tree culture. We have much poor land, not used in agriculture, which could be planted, and it is a national duty to do it.

And we have not only to grow more timber, but to take care of what we use.

Enemies in the Tree

Timber has many enemies in the insect and vegetable worlds, and among the chief of these are certain fungi. The word fungus is Latin for mushroom, but there are many kinds of fungus besides mushrooms and toadstools; it has recently been shown in *My Magazine* that this is the very greatest family in the whole plant kingdom, and that it has wonderful beauty. A fungus is a low form of life composed of cells, and takes many forms, such as the mould which appears on stale bread, or that which attacks the potato.

Several sorts of fungus feed on timber, and cause the decay known as dry rot, which destroys buildings and does infinite damage to houses. This is a very serious thing, for it costs us millions of money every year, not only by destroying wood, but by the great damage to buildings which follows the decay of timber. For example, if the first-floor joists of a house are seized with dry rot, the ceiling and the floor above it have to be taken out and replaced, or the fungus may eat up the whole house.

Millions in Minutes

The dry rot fungus consists of tiny thread-like tubes, which grow lengthwise and also give off branches. These threads creep through and eat up the wood until it is a mass of decay. They grow in themselves, and also by emitting tiny spores, which burst out and float in the air. These spores infect other timber, and so the dreaded disease spreads. So active is this spore spreading that a square metre of ripe dry rot fungus throws out 500 million spores in ten minutes!

Although the disease is known as dry rot the fungus attacks only moist wood; water is necessary to its existence. It is very important, therefore, that wood should be dry and well-seasoned before being built in. If this precaution is taken dry rot is not likely to get a hold in a well-kept and warm house.

Cost of Carelessness

Not enough care is taken by builders in storing and seasoning timber, and those who are careless with wood inflict grave loss on the community.

If we use sound, dry timber, taking care to avoid sap-wood, and paint or soak it in creosote oil or some other preservative, we make it reasonably certain that there will be no trouble with the dry-rot fungus. Builders are being urged to greater care in the matter, and it is everybody's duty to help.

If we build a house we ought to insist on examining the timber. In new buildings the use of creosote in the ground floor and ceiling and roof joists costs very little, and saves in the long run.

STANDING FOR 400 MILLIONS

OUR SPOKESMAN AT WASHINGTON

Mr. Balfour Crowns His Career

HOW HE HELPED AMERICA AS A BOY

We give elsewhere the speech of Mr. Balfour at Washington on behalf of the British People. It must have given great joy to Mr. Balfour, who has been our Prime Minister longer than any other living man, to stand for the British Empire on such a proud day.

It is given to few men to crown a career of public service with so dramatic and tremendous a conclusion. In the absence of the Prime Minister, accident or destiny sent him to America as the spokesman of 400 million British people, and it fell to him to utter a judgment which must profoundly affect the course of history. The Washington proposals would have been hopeless without the consent of the British Empire.

Mr. Balfour was in the unique position of being able to pronounce the great acceptance, and so insure that not in vain shall "the New World be called in to redress the balance of the Old."

Crowning His Career

He did so in noble words, words that will live longer than any of his books, longer than any of the brilliant orations he has delivered in Parliament. His glowing endorsement of this immense measure of peace crowns a wonderful career with enviable fitness.

Long years of peaceful enjoyment remain, we all hope, for Mr. Balfour, but life can hold for him no greater distinctions than he has already gained. His part at Washington is the crowning of a life of public service which began over fifty years ago.

The American Civil War sharply divided public sympathies in the Old Country. The Balfours were on the side of the North, and in practical proof of their support the boys blacked the boots of the family and dug potatoes, so that the money saved in wages might help the sufferers in Lancashire, and keep their sympathies with the North.

That was the beginning of Mr. Balfour's training for public causes; now he is famous in the land which won his sympathies then. Between these two periods Mr. Balfour has filled the highest positions in the State. He was Prime Minister for eleven years.

Great Ideal Becomes Possible

For his personal gratification he has immersed himself in those philosophies which are apt to chill natural enthusiasms and eager ideals. Said a charming old man on meeting Dr. Johnson after 50 years' absence: "You are a philosopher, Dr. Johnson. I, too, have tried in my time to be a philosopher, but I didn't know how, for cheerfulness was always breaking in." Cheerfulness has always kept breaking in to mellow the philosophy of Mr. Balfour, and with the music he adores he keeps his spirit gentle and humane.

And so we find him, at 73, speaking for us all, not sad or disillusioned, but with a warmer hope and faith in mankind than he has ever previously exhibited. The realisation of a great ideal suddenly becomes possible to him, and his words are but a modern setting of an older song of thankfulness: "Lord, now lettest Thou Thy servant depart in peace, for mine eyes have seen Thy salvation."

A DISH OF GREEN PEAS

We continue to receive records of flowers out of season, and from Leicestershire we hear of peas gathered on July 29, and sown, coming up, flowering, and producing peas that were gathered on November 7 and eaten.

ODD PLAYFELLOWS CHILDREN OF THE WILDS IN INDIA

Boy Who Was Brought Up Among the Wolves

AN ANIMAL ALLIANCE

From time to time the C.N. has received stories from India of wolf-children, as they are called—that is to say, of children who have been carried off as infants by mother wolves.

Caught when the mother and the cubs have not been hungry, they have been admitted to membership of the family. The wolf-mother suckles the human baby as she suckles her own offspring. The truth of some of these strange stories is beyond question.

Now one of our grown-up readers at Surbiton, who passed her childhood and youth in India, writes to tell us of one of these wolf-children rescued from the wilds. He was quite a well-grown lad, we are told, with long, unkempt hair, and, of course, no clothing. He could not speak a word. He had just the language of his savage foster-mother; he could growl and yell, and nothing more.

Wolf's Motherly Spirit

This leads to a consideration of animals feeding children; and our correspondent mentions another child in India who grew up on the milk of goats—milk taken, not from a bottle, but straight from the udder of the goat. The goat would stand quiet and contented while the child drank her milk, exactly as if she were suckling a kid of her own.

It is the same motherly spirit that moves the nursing wolf. Indeed, she would be the more anxious to adopt a hungry human baby if she had lost her cubs than if her cubs remained alive, for then she would be thankful to be relieved of her milk, as is the calfless cow.

Another note from the same interesting budget describes the relations between a dog and an Indian mongoose. The first mongoose owned by our friend was killed by her dog; but the second was admitted to friendly partnership. The two played together delightfully. The mongoose would romp and pretend to bite the dog's ears, and the dog would playfully take the mongoose's head into his mouth.

That was a happy alliance for a household in India, for to the guardian dog's courage against all ordinary foes there were added the nerve and skill of the mongoose as a killer of poisonous snakes.

A LONG LIFE ENDS

Kent Loses an Old Institution

Very old trees stand up sometimes long after they have ceased to put forth leaves, after they have become dead wood. There are old human institutions, too, that linger on for centuries after they have dropped into disuse.

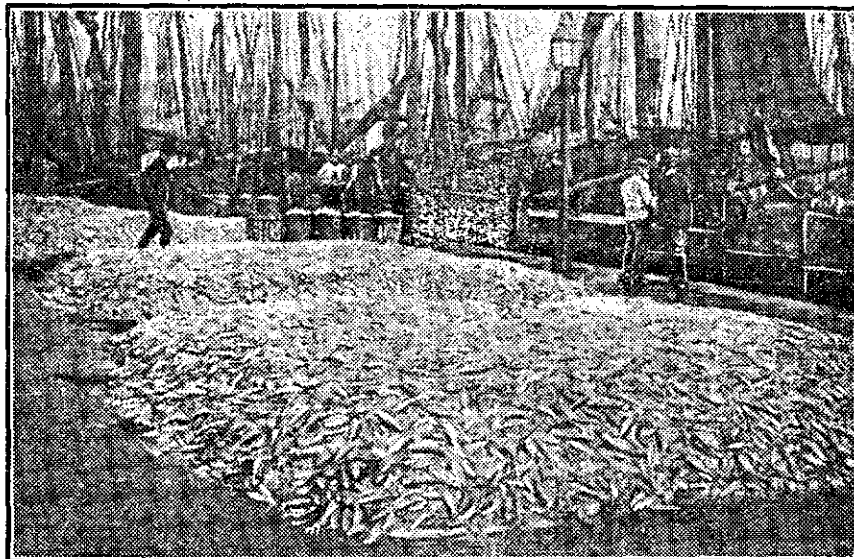
Once in every district there was a Court Leet which administered justice and appointed local officials. These were important institutions nine centuries ago, but they lost their importance, and most were dissolved a long time back.

A few remained, however, like old oak trees that have no more sap in them, kept up for their historic interest. One of these was at Gillingham in Kent; it had no authority, and when the president of it died it was decided not to elect another. Then the members met and declared that the Court Leet of Gillingham was dead after existing since the year 1070, four years after William the Conqueror landed at Pevensey, won the Battle of Hastings, and seized the English throne. A long life indeed!

LETTER FROM C. B. FRY

Mr. C. B. Fry, in sending the article we print elsewhere this week, writes that he has read with delight "Arthur Mee's Hero Book," with its inspiring lives of so many good men. Such books, says Mr. Fry, do more good than mountains of advice.

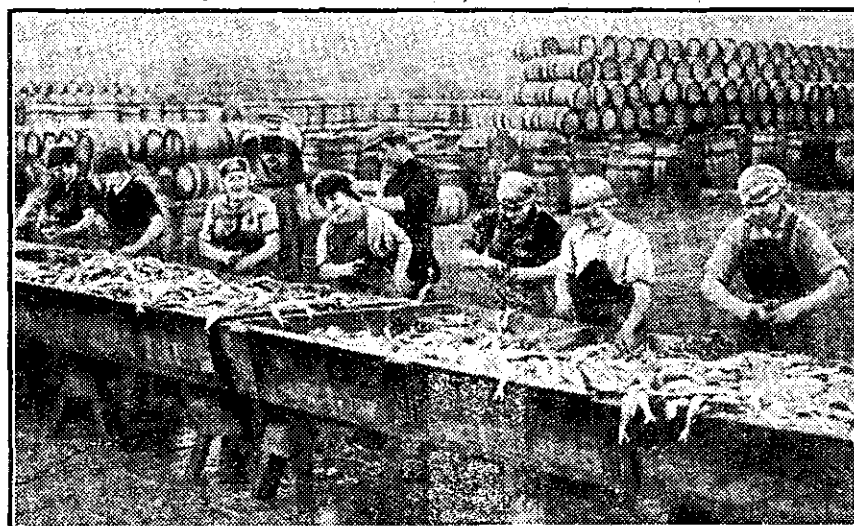
FOOD SUPPLIES FOR HUNGRY EUROPE



Millions of herrings, just landed, lying on the quay at Lowestoft



Packing the herrings in barrels for shipment to the Continent



Scottish lassies from Aberdeen preparing the herrings for the market at Lowestoft

For a long time the shoals of herrings that come to British waters in autumn were missing, and it was proposed to send out airmen to search for them. But just as this was about to be done the herrings arrived, and millions have been caught. Many are packed in barrels and exported to the Continent, where the people welcome them in these times of scarcity.

CAMERA-SCULPTOR SOME NEW KINDS OF PHOTOGRAPHS

Sitting for a Portrait Carved in Relief

A VERY INGENUOUS PROCESS

The famous French scientist M. Louis Lumière, who invented the first practical cinematograph and the first means by which any amateur photographer could take photographs in natural colours, has recently exhibited in London a wonderful invention by which he is able to produce photographs far more real than anything hitherto seen.

A special camera is needed for these photographs, as each sculpture-portrait consists of a series of portraits taken one after the other, all of which are afterwards combined.

The lens of the camera and the photographic plate are kept moving during each exposure, but they move at different rates. In the case of a portrait a sharp image of the part nearest the camera would be first taken—let us say the nose—and the motion of the lens and plate is so adjusted that everything else in the picture is diffused, or blurred.

The Box of Photographs

The next picture is taken with the sharply-focussed image a little deeper—the eyes and chin, for instance; then another picture in which the cheeks and beginning of the ears are distinct, and nothing else. Six such exposures, each giving a photograph of a different plane, or section, as it were, of the sitter are made in this way, and six transparent prints are made from them.

The transparent pictures are fitted, one behind the other in a grooved box, in exactly the positions corresponding to those in which the photographs were taken, and they are illuminated from the back by an electric lamp.

When viewed from the front they give the "photo-sculpture" effect which has created a good deal of interest recently in the scientific world.

Spiral Line of Light

By a curious chance, another method of making photo-sculptures has been invented at Brighton by Mr. H. M. Edmunds, who has succeeded in producing photographs in relief by means of a special camera and carving machine. The photograph acts as a key, by which the depth of carving is controlled in a most ingenious way.

The secret of this process, in simple language, is as follows. The sitter who is being photographed is illuminated by the light from a magic-lantern, a lantern slide of a large spiral line—like the hairspring of a giant watch—being thrown upon him. As different parts of the face are at different distances from the lantern, the spiral image cast upon the face varies in thickness, the lines being wider the farther the distance from the lantern.

The sitter is photographed with an ordinary camera, and a portrait is obtained which shows over it the spiral image, varying here and there in width.

Help from the Microscope

The photographer has a carving instrument consisting of a drilling-machine and a microscope. The spiral line on the portrait, with variations in width corresponding to the different depths in the image, is followed closely with the microscope, and the motion given to the microscope in so doing causes the drill to work more or less deeply in the stone or marble.

When the whole photograph has been traced over with the microscope a complete portrait has been cut away in the material, and a sculpture is produced.

The complications and difficulty of the process could be easily overcome by the use of well-known electrical inventions, and a combination of appliances may soon make photo-sculpture extremely simple and familiar.

FROG'S COAT OF MANY COLOURS

A CELLAR MYSTERY

Little-Known Powers of a Familiar Friend

BROWN AND GREEN BY TURNS

By Our Natural Historian

The C.N. carried a surprise into a Scottish home the other day when its Question Box informed one of our grown-up readers that frogs have something of the chameleon's power of changing colour to match surroundings. As fortune would have it, there came immediate confirmation of the statement away up in Dunoon, where Highland Mary's statue stands.

"I had never before heard of a frog changing colour until I read the fact in the C.N.," says our correspondent, who then goes on to tell the following interesting experience:

"Last week our maid found a young frog in the coal cellar. It was resting at the time on some tea-leaves, and was of the same colour—brown. She put it on a shovel, when it turned dark grey or nearly black. After that she placed the frog on some green leaves in the garden. The frog again changed colour, this time to green."

Little Cells of Colour

Now that Argyllshire frog was no exception to his order. The incident will doubtless stimulate a stream of letters to the Question Box, asking: How can the frog do these things? Let us anticipate and answer this here.

There is no colour in the skin of a frog; the colour we see is contained in pigment cells contained beneath the skin. There are black, brown, yellow, and red pigments, some stored as tiny grains in cells, some more generally diffused, and certain excitements result in the production of green and blue pigments. The change from one colour to another is a highly complex process. It is all done unconsciously and instinctively, of course; Mother Nature works the wonder, not the individual frog.

Mystery for the Scientist

In most cases the colour scheme of the body is governed by what the frog sees, but it is not always so. No doubt the Dunoon frog turned green on the green leaves because its eye signalled to its brain a message explaining the surroundings, but mere contact with leaves in darkness would have had the same result. Even if the frog had been blind it would have turned green on contact with the leaves.

It is all very mysterious and not fully understood, but it is clear that sight and feeling both enter into the question.

Touch as well as sight plays its part in the transformation of the frog's garment of hues. Place a frog on a rough surface and he will turn as dark as ebony. During the millions of years frogs have inhabited the earth they have found, on the average, that rough surfaces mean trunks of trees or rocks.

Nature's Many-Coloured Coats

These are dark in tint, so the safest tint of the frog is one of sombre hue, so that it shall not be easily distinguished from its background.

As knowledge advances doubtless we shall find that many animals of the lower world possess something of the same power. Even children know how minnows brighten and glow when feeding, and how gay and gaudy they are in the courting season. Many fishes have this gift of the chameleon. But here there can be little doubt that the change is wrought solely as the result of what the eye sees.

Nature has coats of as many colours as Joseph's for her humblest children, but this is a permanent garment of defence of which the tints alone need alteration.

HONESTY TO THE FINGER-TIPS

A Black List of Wrong-Doers

Nothing but complete honesty down to the finger-tips is of any use in life now, for it is by them that men will soon be traced wherever they go, and their characters will follow them.

The latest country to make finger-tip registration compulsory is Argentina.

When the new year comes everyone entering the Argentine must have his finger-tip record taken, and carry it with him, with his photograph.

He must also have a certificate from the police to say that he has not been disorderly, and has not been imprisoned for the past five years.

So the wrong-doer will be marked and chased all round the world, carrying his own condemnation with him.

It is a poor sort of honesty that is adopted for convenience, but to be a wrong-doer will be inconvenient for people who travel when the black list of undesirable persons is sent round.

POP GOES THE BOILER

Science of a Grain of Corn

How pop-corn can best be made and why it pops are subjects that have been recently investigated at one of the well-known American universities.

The corn should be heated gradually for three minutes; quicker heating causes failure. During these three minutes the starch in the corn is changed to dextrine, and the swollen dextrine cells become charged with steam, due to water formed by chemical combination within the corn kernel.

The kernel acts like a tiny boiler, and the steam increases until its pressure is so great that the boiler bursts. This is the pop, and the boiler is the pop-corn.

FIVE LIVES FOR A BUTTERFLY

Science Gives the Insect a Lift

Some very remarkable experiments in prolonging the life of insects have been made by M. Louis Destouches, who has discovered that by keeping caterpillars and moths at varying temperatures, instead of at one temperature, their lives can be prolonged five or six times.

Butterflies kept in this way will live for 35 days instead of six or seven, will lay two or three times as many eggs, and apparently enjoy their long life.

The only difference is that one day they are kept at a warm temperature—about blood heat—and the next day at a temperature a little above freezing-point, the temperature being changed in this way each day.

Science has thus solved the problem of giving an enormously-increased life to certain insects. Will it ever succeed in prolonging the life of human beings?

GOVERNMENT CHEMIST

What He Does For Us

Over 300,000 different samples have been examined during the past year in the Government laboratory.

Various materials are tested to see if they are adulterated or if they contain ingredients on which duty must be paid, and so on. Some samples of tea were found to contain grass seed, chocolates contained fats which are not suitable for food, and some fraudulent foodstuffs contained china clay to make them weigh more heavily!

To the Government chemist and his staff we owe a great deal for watching over the purity of our imported foods and manufactured articles.

THE POOR FOUR

A lady member of the Alberta Parliament informs us that at the last election in that Prohibition province of Canada there were 187 candidates. Only four were against Prohibition, and all four forfeited their deposits for not polling enough votes.

Seven out of the nine provinces of Canada are now under absolute prohibition of alcohol.

TRAPPING THE RAT

Caught in a Box as He Leaves the Ship

NEW DEVICE FOR SEAPORTS

The war on rats has led to the invention of a clever device for catching these pests as they leave the ships on which they travel from port to port.

Most people know that the rats leave the ships by walking along the hawsers that fasten them to the quays, and often they board a ship in the same way. To prevent them doing so funnel-shaped devices are placed on the ropes about midway between the ship and the shore, over which the rats cannot climb.

But a great improvement on this device has now been made. It consists of a rat-trap fastened to the hawser which not only prevents the rat crossing, but cages the animal securely and prevents its escape.

The trap is in the form of a box in two compartments, hinged in the middle, so that it can be quickly opened and closed over the rope. There are openings to each section through which the rats can enter, and a series of flexible steel prongs inside enable them to pass but prevent them returning. They are, therefore, trapped, and can be despatched when the sailors open the boxes.

The device has already been tried with great success in New York Harbour, and will no doubt soon become general in the ports of the world.

DOGGIE BY NIGHT

Lest We Forget

We gladly give this letter from the Canine Defence League, though C.N. readers will hardly need its thoughtful appeal.

The coming of winter leads us to suggest that dog owners should arrange for out-door kennels to be moved to positions sheltered from north and east winds.

It is much to be desired that dogs be taken indoors at night.

Rapid fall in the temperature is especially trying to chained-up dogs, which, because of the restriction of movement, cannot maintain a healthy blood circulation. Release from the chain would be a boon to these dogs.

Beddings should be generous in quantity, and may be of hay, straw, or shavings. A frequent change is desirable.

DIPHTHERIA

Parents Held Responsible

By a Medical Correspondent

In America the public health authorities are trying to put an end to diphtheria by injecting all children with toxin-antitoxin, so protecting them from the disease for several years, and perhaps for life. In North Carolina the public health authorities actually hold the parents responsible if a child contracts diphtheria.

It might be a good thing to take similar measures here, for signs point to a severe epidemic in the coming winter.

MARY HAS A LITTLE DOG

And It Follows Her to School

A Stalybridge reader sends us this account of a dog that has qualified as a prize-winner by attendance at a Sunday-school.

At a Stalybridge Sunday-school we have a curious kind of scholar. For over three years a dog has attended. One year it won a prize for regularity.

It is pretty every week to see it escort a little girl to the school, jump on the chair next to her, and remain perfectly quiet during the lessons.

It has only made a noise once, and that was at a concert, when by barks it joined in the applause.

THE WEEK IN HISTORY

BRAVE MARSHAL NEY

Blind Poet Who Won Eternal Fame

A PARLIAMENT OF ART

- December 4. Carlyle born at Ecclefechan . . . 1795
5. Alexandre Dumas died at Fuy . . . 1870
6. Henry VI born at Windsor . . . 1421
7. Marshal Ney shot in Paris . . . 1815
8. Thomas de Quincey died at Edinburgh . . 1859
9. John Milton born in London . . . 1608
10. Royal Academy founded . . . 1768

Marshal Ney

MICHEL NEY, marshal of France, duke, and prince, was the son of a maker of wine barrels, and was educated at an elementary school. At the age of 19 he enlisted in a Hussar regiment, and at 27 was a general.

Then he fell under the personal influence of Napoleon, who chose him as leader of his most daring military movements, and, with good cause, named him "the bravest of the brave."

Ney's career under Napoleon was one of almost magical success, but his disputes in Spain, where he was placed under Massena, placed the French at a disadvantage. In the disastrous Russian campaign which broke Napoleon's power Ney was the great hero of the winter retreat. He shouldered a musket and marched on foot with the rearguard.

After Napoleon's first abdication Ney accepted service under the Bourbons, but when Napoleon returned from Elba he again fell under his spell, and at Waterloo played the part Napoleon should have played, leading charge after charge, and fighting on foot when five horses had been killed under him.

When the Bourbons were restored, to their everlasting disgrace they had the heroic soldier tried by court-martial and shot in cold blood.

John Milton

IN any thoughtfully-made list of the six supreme poets of all lands and all ages John Milton would have a place. He dedicated his life to poetry as a young man, and early gained wide and well-won fame by exquisite verse.

Then, as Latin Secretary to Cromwell's Government, he plunged into dreary politics until his party lost power, and he was left blind, persecuted, and comparatively poor. Then he resumed his mighty mission as a poet, and wrote the monumental epic "Paradise Lost," by far the most dignified and the most imaginative poem in the English tongue.

All the money received by Milton and his widow for his great book, picturing the loss of Heaven by Satan and other rebel angels, and the loss of Paradise by Adam and Eve through Satan's malice, was £18; but it has endowed the poet with eternal fame.

"His soul was like a star and dwelt apart."

The Royal Academy

THE Royal Academy was founded to cultivate and improve the arts of painting, sculpture, and architecture; and to these has been added engraving.

The Academy has fulfilled these purposes for over 150 years and has become a kind of Parliament of Art.

Most people think of the Academy as the provider of an annual show of pictures in London, painted during the last year in Great Britain; but it does much more than that. From the first it has been associated with a school for the development of artistic aptitude. It has given official recognition to artists who, in the opinion of their fellow artists, have attained distinction. And, through the generosity of artists, it has bought pictures showing exceptional merit, thus helping the profession financially, and by the establishment of scholarships giving chances of tuition to promising students.

The Academy is often criticised for slowness in acknowledging the merits of new styles of painting, but its work, though conservative, has in the main been sound and useful over a long period.

Mr. Evans has been presented with a silver medal.

CHILDREN'S NEWSPAPER

DECEMBER 3 1921

Harry Bolton, Esquire

THE grown-up papers have been telling the story of Harry Bolton, Esquire, who is now working on relief employment as a navvy in a quarry at Peterborough, but who, when the war broke out, occupied the honourable position of mayor of the ancient Lincolnshire town of Grantham, and in that position gained the right to the honourable and much misused title of Esquire by being made one of His Majesty's Justices of the Peace.

When reading this story from real life many people may be inclined to say "What a come down!" and to pity the man who has suffered such a change of fortune, as if he had been subjected to shame and dishonour. Here we mention Harry Bolton so that we may say that by taking a navvy's job he has won as true an honour as any he can ever win, however much he may prosper in the future.

Of course it is saddening to think that Mr. Bolton, a skilled engineer's fitter, respected enough by his fellow-townsmen in Grantham to be elected mayor, should, by the wave of unemployment that has swept over the country, be left workless in Peterborough, where he had been an engineer. It is saddening to know that for 46 weeks he has sought work throughout the country, travelling 700 miles, and finding no one who could afford to engage his skill, as there were no orders for machinery. It shows how terribly real is the uncertainty of employment for the sound workman.

From that point of view our sympathy must flow out to this workless craftsman—all the more so because, when the final test came and work was offered, though it was the work of a navvy, which is heavy and needs another form of skill than that which serves an engineer's fitter, he manfully took the work and again became a producer of things that mankind needs.

But there is a fine truth underneath this conduct of Harry Bolton, Esq., J.P., navvy; and let us not miss it. Any productive work that a man can put his hand to effectively and heartily is splendid. It is so whether it be the useful work of public government as a mayor or a magistrate, or the more plainly productive work of an engineer's fitter, or the rougher but useful and productive work of a navvy. There is no dishonour in any of its forms, but the most real honour.

And so, while wishing Mr. Bolton a happy return to his old trade, we wish him happiness in his honourable work, believing that nothing he has handled in his life will become his manhood better than his navvy's pick and shovel.



THE EDITOR'S TABLE

Fleetway House, Farringdon Street, London
above the hidden waters of the ancient River Fleet, the cradle of the Journalism of the world



A Family Scandal

A FRIEND of ours has become headmaster at a school in Northern England, and on looking through the books finds that his great-grandfather was birched for climbing a wall and stealing turnips 137 years ago.

We are sorry that any friend of ours should rake up old family scandals.

Not Wanted

WE are glad to read of a famous trade that is not doing very well. The Toy Manufacturers' Association of the United States has just been in conference, and one of the things we gather from its meeting is that the toy-soldier business is done for.

We love those lines of Eugene Field:
The little toy dog is covered with dust
But sturdy and staunch he stands;
The little toy soldier is red with rust,
And his musket moulds in his hands,
but we love still more those mechanical toys that have taken the toy soldier's place in the kindergarten and the nursery. They beat the soldier hollow.



Waiting for the Doctor

Take Your Measure

JOHN RUSKIN had a particular love for fishes, and in one of his letters he told a friend why. He loved fishes because *they always swim with heads against the stream.*

John Ruskin loved the difficult thing. He abominated people who could find happiness in taking things easy. With him the only rightful attitude for a human being was head against the stream.

If you want to get your measure, your true measure in this great universe, measure yourself with a difficulty. Set out to do a hard thing, a right thing, an unpopular thing. If you lose heart at once, if you give it up, if you sink back into apathy and sloth, your measure in the universe is the number of inches from the soles of your feet to the crown of your head.

But if you strain every nerve to win through, not caring if you are beaten in the end, then your measure in the universe is the stature of the angels.

Measure yourself against something greater than you. The way to be tall is to reach up till you touch the stars.

The Boy in the Cornfield

Is not that story of Abraham Lincoln and his book worth telling again just now? He borrowed a Life of George Washington from a neighbour and put it one night in the log wall of his home. It rained and nearly ruined the book. Abraham took the book to his friend, and said: "Look what has happened, and I haven't a cent. Take it out of my hide."

But the neighbour did not want it out of his hide. "No, you keep the book," said he, "and if you will pull cornstalks for three days I will call it square." So Abraham Lincoln worked three days in a cornfield for a Life of George Washington, and in due time he sat in Washington's place.

One of the truest things in the world is that nothing but work brings either fame or happiness.

Tip-Cat

MR. LAMBERT says infants' food is a key industry. But infants have no locks!

AN M.P. says that Labour is not fit to govern. All the same, we know politicians who want to govern it. It is time this round world was square.

"CULTIVATE enemies," says Mr. T. P. O'Connor; "they keep you going." But suppose we do not want to go?

SOMEBODY claims to have invented a silencer for street cars. But it is too late; the motor-bus is doing it.

A SKELETON in a cupboard is all right if it will stop there.

OUR tailor is delighted with the increase in rents.

ADVICE to those who want to set the world's business going: Money is a boomerang; turn it loose.

WHEN the last word is said at the Irish Conference all the members will be speechless.

What Do They Print?

THE newspapers of America are proud of a total circulation of thirty-two million, seven hundred and thirty-five thousand, nine hundred and thirty-seven copies a day.

Yes; but what do they print, we wonder!

The Time Shall Come

The time shall come when earth shall be A garden of joy from sea to sea,
When the slaughterous sword is drawn no more,
And goodness exults from shore to shore.

Toil, brothers, toil, till the world is free,
Till goodness shall hold high jubilee!

THOMAS COOPER

Every Child's Creed
For Every Child's Christmas

The spirit of the Children's Newspaper, which we took the opportunity not long ago of embodying in a Creed for Every Child, spreads itself surely through the world.

War, greed, hate, strife, ignorance, superstition, and disease—every one of them must go; and there must grow in their place a love of all that is noble and true.

As one of the many letters received concerning Every Child's Creed it is a great pleasure to give this from the Rev. Alfred Turner, ex-Moderator of the Presbyterian Church of Ireland.

Will you permit me to say that the Children's Newspaper is a wonderful production, and that among many wonderful things I have seen in it the most wonderful is "Every Child's Creed"?

It is great, and it is not too much to say that its publication has already rendered the combined wisdom of the now famous Lambeth Conference obsolete.

It is the most important thing I have seen in a newspaper. What a beautiful thing truth is!

What We Believe

And truly, if this be the creed of our children, we may have hope, and it may yet come to pass, that a little child shall lead them. Take my advice and send a copy to each member of the recent Lambeth Conference. It might perhaps open their eyes and reveal to them the only basis upon which the re-union of the Churches can be effected.

It might also indicate incidentally that they, the elders, are a good piece behind the children in this most important matter in our life; for it does vastly matter what we believe. The author of the Creed knows many things; and will you pardon me if I say that you are to be commended for the courage of your convictions? More power to you, say I.

In response to many suggestions the Creed has now been issued separately, and is published as a Christmas booklet. (Every Child's Creed. By Arthur Mee. Hodder & Stoughton. 2s. 6d.) In its dainty pages, with their lovely colours, the creed has a beautiful setting, and we hope our readers will scatter it abroad this Christmastide.

SOCIETY AT SEA

By a North Sea Correspondent

There was a great gathering at the mouth of the Thames the other day to meet the King-fish, who was accompanied by his chaplain the Monk-fish, and his herald the Trumpet-fish.

His bodyguard included the Sword-fish, the Scabbard-fish, and the Pike.

The King was wearing a Topknot and a Ruff, and also a Bib with a Ribbon-fish.

The Pilot-fish guided the guests, among whom we noticed Mary Sole and John Dory. Some of the wealthy people present included a Gold-fish, a Gilthead, a Golden Tench, and a Silvery Hairtail.

There was, unfortunately, some attempt to Carp and Pout at the refreshments. Several guests believed the chef would Charr the food. It certainly Smelt as if this were so, and it is said that many caught the Whiff and saw the Fire-flare. The Coalfish was suspected.



BRITAIN SEEKING PEACE

MR. BALFOUR'S FINE SPEECH AT WASHINGTON

What Sea Communication Means to an Island

A LANDMARK OF HISTORY

For generations and for centuries there will be read in the pages of history the speech of President Harding at the opening of the Washington Conference and the speech of Secretary Hughes in proposing the destruction of nearly seventy fighting ships.

We gave the American proposals last week; here we give some passages from the splendid speech in which Mr. Balfour accepted the scheme on behalf of the British Commonwealth.

Speaking of Mr. Hughes's speech, Mr. Balfour said that "it excited the sort of emotions we have when some wholly new event suddenly springs into view, and we felt that a new chapter in the history of world-reconstruction had been warily opened."

Perils of Empire

Then, passing on to the necessity of free communication by sea for Great Britain, Mr. Balfour pointed out the difference between the British Isles and the great American continent. He drew the picture in a passage which we should be glad to feel might be read in every school, and so we give it below.

"There never has been in the history of the world a great Empire constituted as the British Empire is.

"The United States stands solid, impregnable, self-sufficient, all its lines of communication protected, doubly protected, completely protected, from any conceivable hostile act. It is not merely that you are 110,000,000 of population, it is not that you are the wealthiest country in the world. It is that the whole configuration of your country, the geographical position of your country, is such that you are wholly immune from the particular perils to which the British Empire is subject.

Great Ocean Highways

"Supposing, for example, that your Western States, for whose safety you are responsible, were suddenly removed 10,000 miles across the sea; supposing you found that the very heart of your Empire, the very heart of this great State, was a small, crowded island, depending for overseas trade not merely for its luxuries, but depending upon overseas communication for the raw material, for those manufactures by which its population lives, depending upon the same overseas communication for the food upon which they subsist—supposing it was a familiar thought in your minds that there never were at any moment of the year within the limits of your State more than seven weeks' food for the population, and that that food had to be replenished by overseas communication: then, if you will draw that picture, if you will see all that it implies, all that it carries with it, you will understand why it is that every citizen of the British Empire, whether he comes from the far Dominions of the Pacific or lives in the small island in the North Sea, never can forget that it is by sea communication that he lives, and that without sea communications he and the Empire to which he belongs would perish."

Continued in the next column

NEWS FROM EVERYWHERE

Fifty thousand civil servants are being dispensed with in Austria.

The Post Office is laying 800 miles of telephone cables, connecting 69 cities with the underground trunk system.

Remarkable Hit at Golf

A golfer, playing at the Burhill course at Walton-on-Thames, dropped a ball straight into the hole at a distance of about 400 feet.

Generosity of Anatole France

The great French novelist, Anatole France, has just received the Nobel Prize for Literature, worth about £8000. He is handing it all over for the relief of the Russian famine.

Brazil has just brought up to date one of its old battleships, and the repairs have cost about £2,000,000.

The new Mayor of Richmond now presides over the magistrates in the court where he used to appear as a policeman.

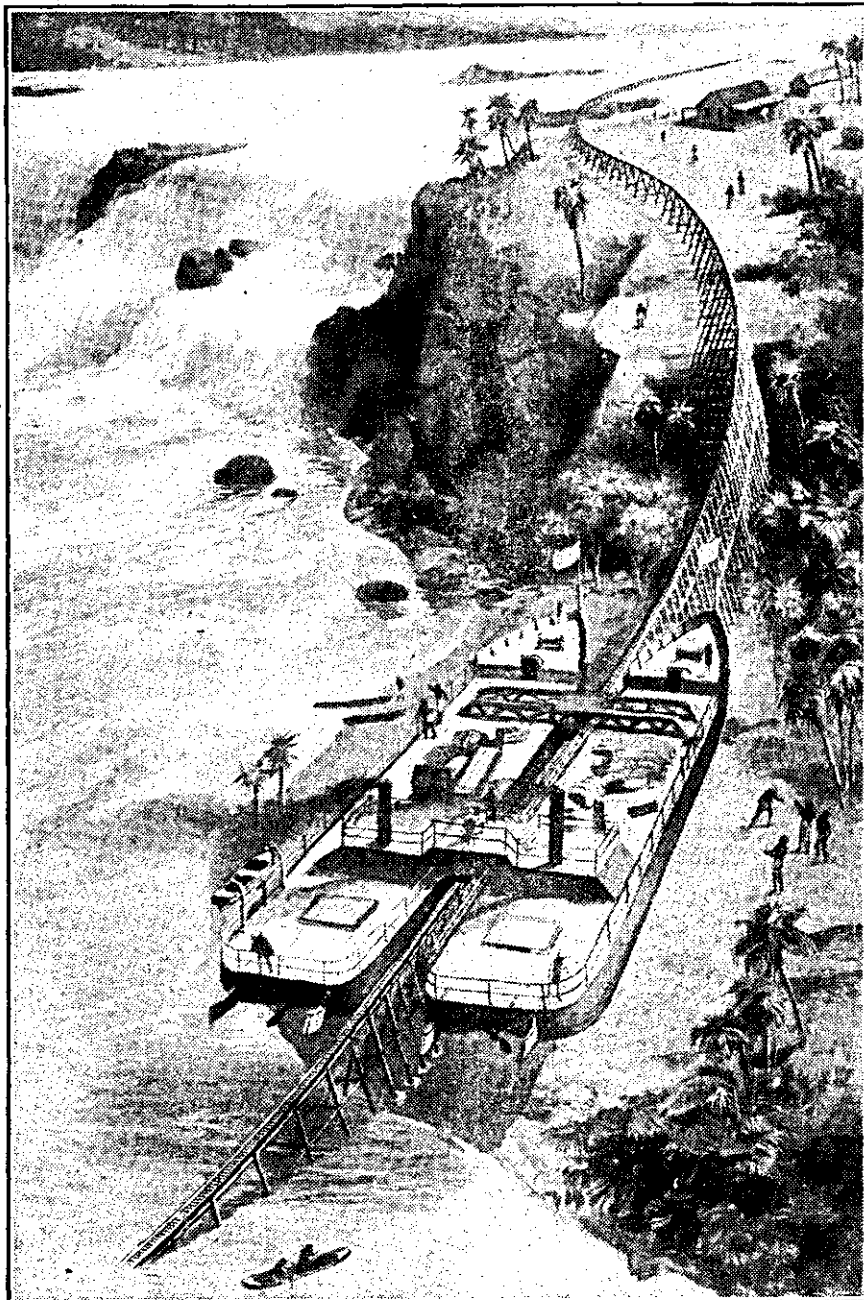
Cromwell's Watch

Oliver Cromwell's watch has just been bequeathed in the will of Major Amplett, D.S.O., along with a cabinet belonging to Lady Jane Grey.

Catapult Launches Seaplane

A hydroplane has been successfully launched from a ship by a catapult device, which sent it into the air at a speed of 48 miles an hour.

HOW THE SHIPS RIDE UP THE CATARACT



The problem of transporting boats over the many cataracts and waterfalls of the Congo River in Africa has at last been solved. Trestle mono-rails are to be built across the obstructions, and boats with twin hulls will leave the water and, by a rack railway device, travel on the rail until the cataract is passed, when they will again enter the water. See page 8

Continued from the previous column

After formally accepting the scheme on behalf of the British Government, and going into some details, Mr. Balfour concluded his historic speech with this fine passage:

"What makes this scheme a landmark is that a way has been found in which, in a manner which must touch the imagination of everybody, which must come home to the dullest brain and the hardest heart, the Government of the United States have shown their intention not merely to say that peace is a very good thing and that war is horrible, but that there is a way by which wars can really be diminished, by

which the burdens of peace, almost as intolerable as the burdens of war, can really be lightened for the populations of the world.

"And in doing that, in doing it in the manner in which they have done it, in striking the imagination not merely of the audience they were addressing, not merely of the great people to which they belonged, but of the whole civilised world—in doing what they have, believe me, they have made the opening day of this Congress one of the landmarks in human civilisation."

So there was accepted on behalf of the British people the most dramatic and historic proposal that has ever been made for promoting universal peace.

VON KLUCK SPEAKS

MAN WHO ASTONISHED ALL EUROPE

Why He Could Not Seize the Channel Ports

WORLD'S FINEST ARMY STOOD IN HIS WAY

From a Special Correspondent

Not long ago an officer with the British army on the Rhine had occasion to pay a visit to the South of Germany.

One evening, as he sat in the hall of his hotel, a young German approached him and said that a German general would very much like to speak to him if the Englishman had no objection.

Instead of replying, "You may bring him to me," the Englishman at once rose and crossed the hall to where the general was seated. This German general was the famous Von Kluck.

"I think you were with the British Expeditionary Force?" said the general. "Yes, sir," replied the English colonel.

An Immortal Army

"I should like to tell you," continued General von Kluck, "that it was the British Expeditionary Force which exercised a decisive influence on the war. My intention was to go farther west and to seize the three Channel ports—Boulogne, Calais, Dieppe—and so put in great peril the isolation of your Island Empire. This intention was frustrated by the British army.

"We had underrated it. We judged it by quantity, not by quality. That little force, I should like to tell you, was the finest army for its size that the world has ever seen."

The man who paid this tribute to the army which defeated his plans was the enemy in whom the British Empire was most interested at the outset of the war, for he it was who controlled the movements of the great army opposing our heroic little force.

Surprise for Von Kluck

His was the right wing of the German host, and his mission was to sweep down the western limit of the battle area, roll up the Allied left wing, and envelop it or drive it back on Paris. There he was to outflank and enclose it, while the German centre moved straight on and the left swung in to the south-west, so that a double envelopment might be accomplished and the entire Allied forces defeated or captured.

If we were surprised to find Von Kluck upon our front at Mons, with three, four, or five times our numbers, he was astonished to find us there at all! Belgians and French he had expected to meet, but this tremendous little force of hard-hitting Britons he had not counted among his opponents. Their desperate battles delayed his march so that he began his pursuit too late, and, though he marched his men thirty miles a day, he never could fling his tentacles round our swift and deadly army.

Germans March Past Paris

He saw the gates of Paris and he saw the ports of the Pas de Calais open to his army, but before he could secure the ports or aim a blow at Paris he was ordered to wheel south-east and march past Paris. Reluctantly he did so, and he was made to pay the penalty, for there emerged a taxi-cab army from Paris that assailed his right flank, and the forgotten British army—rested, re-armed, and re-fitted—leapt afresh at his throat, flung him back over the Marne and back over the Aisne, and then began an out-flanking race with him to the North Sea coast.

Von Kluck has written in his leisure that he had the keys of victory in his hands, that the success which might have been attained by him was rendered impossible by the orders of the Higher Command, but we know now that finally he realises that the unheeded little British army made him miss his destiny. We beat him back, and his plans collapsed in ruin.

SHIP THAT LEAVES THE WATER

TRANSPORT MARVEL ON THE CONGO

Opening Up One of the World's
Big Rivers

SOMETHING NEW IN RAILWAYS

Belgium has just decided upon a wonderful new scheme of transport that will make the Congo continuously navigable for hundreds of miles where now the journey has to be done in stages, involving much delay and expense.

This mighty African river, one of the world's greatest waterways, is navigable from its mouth to Matadi, a distance of 110 miles, and then for the next two hundred miles there are cataracts and waterfalls that prevent any boat travelling on the river for any great distance.

Either the goods must be unloaded from one boat, carried round the cataract, and loaded up on another for the next stage, or the original boat, after being unloaded, must be dragged out of the river, drawn round the cataract on dry land, and then launched and loaded up again on the other side.

Conquering the Cataracts

This, of course, is a serious hamper to commerce, and the delay is enormous as there are no fewer than 32 big cataracts and falls, besides many minor rapids. When these are once passed the river is navigable for a thousand miles.

The Belgians have now solved the difficulty of navigating the Congo over the two hundred difficult miles. They are conquering the cataracts, not by blowing up the rocks, which would involve an expenditure of many millions of pounds, but by a novel scheme never tried before.

The boats that will navigate the Congo will be built with twin hulls connected down their whole length with girder brackets. They will, in fact, be very much like the twin engines and carriages used on the famous Lartigan mono-railway at Ballybunion, in Ireland.

Saving Time and Trouble

The vessel will proceed up the river as far as the cataracts in the ordinary way, each hull having its own engine and propeller and rudder. Then, when it gets to a cataract, it will run on to a mono-rail built on girder trestles in the river and running right over the cataract into the river on the other side.

This mono-rail will be racked with teeth, and between the twin hulls of the boat will be a series of powerful toothed wheels. The engines of the vessel, when the boat mounts the rail, will no longer work the propellers, but will be switched over to turn the toothed wheels. These will grip the racked rail and carry the boat up and over the cataract, and down into the river on the other side. In this way the delay and expense of unloading and reloading the goods at each cataract will be avoided.

Ship Becomes a Train

It is a wonderful idea, yet very simple. Already it has proved successful in a series of elaborate tests carried out on canals near Antwerp, and the work of building the mono-rails over the cataracts on the Congo is to be begun at once.

What will really happen is that the ships will steam up the Congo for just over a hundred miles, and then suddenly change into railway trains. Again they will become ships, then change back into trains, and so on till the two hundred miles are passed.

If the scheme proves as successful as the tests in Belgium and the prospects on the Congo suggest, it will no doubt be extended to other rivers that have similar difficulties, such as the Nile, Amazon, and Yukon. *Picture on page 7*

C. B. Fry to C.N. Boys THE GREAT FUTURE IN FRONT OF US ALL

The Pictures We Should Have Before
Us on Our Journey through the World

IDEALS AND HOW THEY WILL HELP YOU

The Editor of the C.N. is glad to be able to announce that he hopes to print a series of descriptive letters from Mr. C. B. Fry, who has gone to India for the Prince of Wales's tour.

Here is a rousing letter to young Britons from this brilliant and famous friend of boyhood everywhere. Mr. Fry's last thoughts as he went away were of this paper and its readers, for he wrote this article as he sailed down the Thames in the Macedonia.

Not long ago I was motoring along a road in Gloucestershire and a young Indian pointed out some bushes and trees in a little valley, saying, "The Thames begins there."

At this moment I am travelling leisurely down the mouth of the river in a great ocean-going liner, outward bound for India. The little stream that I saw some days ago is now carrying scores of big ships all around us, and is itself almost a sea. Even at its source the Thames begins to be a steady, honest, purposeful stream, and any stretch of it always seems to me to be a symbol of the English race.

High Purpose and Honest Zeal

We have many beautiful rivers in England, but Father Thames is our historic and national river. It is like the English race, steady and purposeful. Taken one by one we English are very ordinary people, and only here and there does a great individual arise; but taken in the bunch and over a long period we are a great people, and, though we might deny it, we possess a great ideal.

We have a steady, honest, and purposeful zeal for humanity. No doubt we sometimes fail ourselves, but our best self continues to run on through our national life like the Thames through our countryside. The Thames does not explain himself; neither do we—he and we, however, keep moving.

People often talk about ideals as if only special and particular people possess them. This is rather true when we mean high ideals. But the really interesting point about ideals is that we all have them, and work all our lives by them.

An ideal is just a mental picture that appears before our minds; and, except when we are acting unconsciously or quite thoughtlessly, we always act because we are trying in some measure to make it real for ourselves.

What Life is Made Up Of

If you pause and consider with yourself you will see that your life is made up, as far as you are conscious of it, of a continuous stream of feelings and mental pictures—a kind of continual panorama, with you yourself in the middle of it unable to escape.

Some of the pictures seem to occur of themselves, but whenever we turn our minds to purposeful action we must first of all make a mental picture of the thing we are going to do and all its surrounding circumstances.

As we grow we gradually get into the habit of having certain special purposes and of making certain special mental pictures; and these are all ideals, good or bad. Whatever their character they come to dominate our lives; we live up to our mental pictures, or we live down to them.

Now, one mental picture we can form is of ourselves as we would like to be, as we should most approve of ourselves as being, or of other people as we would

best like them to be. This is just an ideal, a mental picture, that we hold before our minds. This is what is generally meant by an ideal.

Anyone can see that if our actions and characters depend in a large degree upon their concomitant mental pictures—and they do—it matters all the world that our ideals should be high and good.

Now, it is a curious fact that those ideals which we have, not as individuals but as members of a community or nation, are the most efficacious and uplifting. The reason is that all unselfish or non-self-regarding ideas move us to better action than those that merely concern ourselves.

This appears in quite homely ways. You will find that in cricket, when your mind is fired by a strong hope of saving your side from defeat, you will play far better than when you are thinking merely of your own personal success. For one thing, you will not be nervous; nervousness is a self-regarding ailment.

Aim Your Arrow at the Moon

Again, you will find that a school containing many troublesome and inefficient boys will show a fine combined effort if it is a matter of doing their best at an inspection or some such function, where each member, perhaps in spite of himself, is thinking not of himself but of the school.

That is why it is so high a privilege to be of our great race, and to be able to have an ideal which forbids one to fail even though one is individually, perhaps, not much of a fellow.

We shall find that if we cultivate the habit of thinking of what we ought to be and to do as English men and women, we shall make a far finer job of it than if we just sit down to polish up our single individuality for our own personal edification. All feeling that we have as members of a community lifts us up and spurs us on to better effort. Nobody knows why, but it is so.

There is an old proverb that if you aim your arrow at the moon you may shoot over a tree, whereas if you aim at the tree-top you may only hit the trunk. What that means is that it pays to have high ideals.

Pictures in the Mind

Of course it does. If we plan out our actions to suit mediocre and feeble mental pictures we cannot very well avoid producing mediocre and feeble lives for ourselves. When we get on in years and say to ourselves, "I wish I had my time over again," what it comes to is that we are making *now* mental pictures, ideals, which we sadly wish we had made *then*.

Such regrets are really retrospective ideals. They are not bad things to have, but they do not help us now. What we have to do is to try to do the best with our mental pictures in the future.

When people, like myself, who try to give good advice to boys and girls talk about the value of ideals, what we mean is that we know very well that if only we had made finer mental pictures to lead our actions and our lives we ourselves should have been what we hope all you boys and girls are going to be—the very best kind of men and women.

We want to see all the little streams grow into big rivers and carry fine ships out into the great ocean.

Make good pictures in your minds, my mates.

C. B. F.

HUMOUR GONE ASTRAY

THE PROFESSIONAL PROFESSOR FROM MCGILL

Things that Make for Success
in Life at School

A VERY BAD JOKE

McGill University is one of the noble institutions of Canada. For a hundred years it has been helping to shape the ideas of the world, fill up the gaps of human knowledge, and mould the characters of men.

A man from such a place, with such a fine tradition to maintain, should be careful what he says, but we do not think McGill University would be proud of a circular that has been sent to us belittling so much the noble cause for which it stands.

Professor Stephen Leacock has come over from McGill University, where he teaches economics, to lecture in this country, and in his advertising circular we are told that he has made whole nations laugh.

Booming a Joker

Now, a laugh is a very good thing; there is nothing finer in the world than good laughter. Mr. Leacock's humour has been widely advertised; we do not remember a professional joker who was ever boomed so much; he has even interviewed himself. We have no doubt his professional humour is worth the money people pay for it.

But we feel called upon to protest strongly, in the name of hundreds of thousands of serious people, against Professor Leacock's testimonial to loafers. If it is humorous it is a very poor joke, not worth the money for a back seat.

What is wanted in these days is that the youth of the world should grow up to manhood and womanhood well equipped for the struggle before them, and it seems to us a very bad time to send broadcast through the country the suggestion that school life matters very little, and that those who do well in the world are those who were lazy at school.

A Silly Thing to Say

This is what Mr. Stephen Leacock says in one of his advertisements:

I have noted that of my pupils those who seemed the laziest and the least enamoured of books are now rising to eminence at the Bar, in business, and in public life; the really promising boys who took all the prizes are now able with difficulty to earn the wages of a clerk in a summer hotel or a deck hand on a canal boat.

All we can hope is that Mr. Leacock is a better lecturer than he was a teacher; he must have been very much out of place in giving all the prizes to boys who were good for nothing.

But, of course, it is not true to suggest that laziness at school brings success in life, while the taking of prizes leads to failure, and it seems to us a great pity that a professor of McGill University should be advertised in such a way among the young people of this country.

Elsewhere Mr. Leacock says that "a half-truth, like half a brick, is always more forcible as an argument than a whole one," but this particular half-truth seems to us neither good argument nor good humour nor good sense, but pitifully feeble. To educators all over the English-speaking world it will seem about the last sort of opinion in the world that would be expected to come from inside the splendid and famous walls of McGill University.

A SHIP HEARS 2700 MILES

A message was sent recently from the huge Nauwen wireless station in Germany to an Argentine steamboat at a distance of 2700 miles. The vessel had not sufficiently powerful apparatus to reply, but the messages were distinctly heard.

BATS STILL AWAKE

Little Flitter-Mouse On the Wing TINY CREATURE THAT RAIDS THE PANTRY

By Our Country Correspondent

Bats are still flying in considerable numbers despite the lateness of the season.

The bat that is seen in considerable numbers just now is the pipistrelle, or common bat, sometimes called the flitter-mouse from its general likeness to a mouse and its flitting habits.

It is the commonest of all our British bats, and not only appears earlier in the year than any of the other species, but it also retires later for the winter. In fact, its winter sleep rarely lasts more than three months, and in very mild years it may not retire for more than two months. The pipistrelle has sometimes been seen on the wing a day or two before Christmas.

Gnats and other small insects form the bulk of its food, and it will even devour the hard wing-cases of beetles. In captivity it readily feeds on meat minced very fine.

As the season advances, and insects become scarce, the pipistrelle often flies by day as well as by night, being driven to do so by hunger. A warm, sunny day brings out a few insects, and that is the bat's opportunity.

Close observers of our British bats say that each species has its own peculiar place of slumber during the daytime. The noctule usually resorts to a hollow tree, and the long-eared bat to the roofs of houses. The pipistrelle is generally found in crevices of decayed brick walls, behind leaden rain-pipes, and in the cracks of old door frames. It is not very particular, however, about its place of retirement, and specimens have been found in the spout of a disused pump, in a cavern, in a thatched roof, and in a pile of hurdles; and the fact that men are working close by does not seem to disturb it at all.

In the dusk, when it is on the wing searching for prey, the farmyard or orchard is its favourite hunting-ground.

Pipistrelle bats kept in captivity have been fed on flies, and their method of taking them is interesting. It knocks the fly down with its wings and instantly falls upon and devours its prey. It seems fond of meat, and sometimes makes its way into the larder of a country house, where it has been found hanging to the joint making a meal.

The pipistrelle is the smallest of the British bats and, except in size, closely resembles the noctule. The length of the head and body is about an inch and a half and the stretch of wings just over eight inches.

THE U.K. AS SEEN FROM THE SUN



This is how the British Isles would appear at noon in December if you could see them from the sun. The lines of latitude and longitude are, of course, only added to show the perspective.

BLIND CHILDREN Who Will Help Them?

All who pity children that are blind—and who does not?—will be glad to be reminded that the National Institute for the Blind, to which St. Dunstan's is attached, now has a special branch called the Sunshine Society, which helps to support the home and school at Chorley Wood, Hertfordshire, for little children blind from their birth.

It is hoped that branches of not less than fifty members will be formed all over the country for making this humane work easy.

The address of the Secretary of the Blind Children's Branch is 224, Great Portland Street, London, W.

SHIPS CHOKED BY FLOWERS

EXTRAORDINARY BATTLE WITH THE HYACINTH

How It Blocks Up Great Rivers

STEAM TO THE RESCUE

The United States, with all its advantages of climate and richness of soil, has troubles that we know nothing about in this country.

One of the most remarkable incidents in the great fight for civilisation has just taken place in Louisiana.

In Britain hyacinths, whether wild or cultivated, are greatly appreciated, but in certain States of America they are regarded with fear and detestation. The water hyacinth is a pest that has to be fought at a cost of many millions of dollars a year in order that it may not hold up commerce and delay industry; and in some of the Southern States that border on the Gulf of Mexico—Louisiana, Alabama, and Florida—the hyacinth has taken complete possession of certain rivers and grown so rapidly that it forms a solid mass across the channels, often preventing navigation.

Navigation at a Standstill

Huge sums are spent annually in cutting out the flowers in the same way as the Nile sudd is cut out, or in poisoning them by spraying the growing mass with arsenic.

Only a short time ago several vessels were caught in a "hyacinth jam" in the Bayou Lafourche, one of the delta outlets of the Mississippi River. The ships could move neither one way nor the other. A powerful stern-wheel steamer was sent to the rescue. It towed a barge carrying arsenic sprays; but the growth of flowers was so solid that the vessel broke several steel ropes in trying to pull the barge through the mass.

It looked as though the vessels would have to remain prisoners, but the Governor of Louisiana, who had gone to the scene, had a clever idea. He suggested that the flowers should be fought with steam.

Cutting a Way Out

Nozzles and hoses were improvised for the purpose, and live steam at high pressure was directed on the plants. The effect was like magic. It seemed as if a wizard's wand had passed over the flowers, for they were instantly withered, and the steamer was able to go forward at the rate of a mile and a half an hour, cutting a passage through which the imprisoned vessels could pass.

So extraordinary was the success of the steam that the scheme is to be adopted now on all rivers that are troubled with this pest. Boats will be equipped with special hoses and nozzles which will shoot the steam, not only on the leaves and flowers, but on the bulbs themselves, and in a few hours millions of the obstructing plants will be destroyed. See World Map

CALLING MASTER

A Dog and Its Game of Ball

An Essex lassie thinks her dog Joey is clever enough to make an appearance in the C.N., and this is how she proves it.

He has a rubber ball of his own. If I tell him to wait where he is and look the other way he will do so, while I hide his ball in a bush. Then I call him and show him which bush it is in, and he will walk round it, and stand on his hind-legs and shake the bush with his paws till it falls.

Every Sunday morning Daddy has a sleep, and Joey knows he has to be wakened at dinner-time. As the time comes near he keeps walking round mother, longing for her to tell him to go, and when she says "Waken master," he runs and barks at the door, and will not stop till Daddy opens it.

C.N. QUESTION BOX

Little Puzzles in Natural History

Answered by Our Natural Historian

All questions must be asked on postcards, and not more than one question on each card.

What are the Knots in Wood?

They are the hard wood on the surface of the trunk from which branches have been cut or broken.

How Can Leaves be Skeletonised?

It is only necessary to place them between the leaves of a book; time is the chemist who will do the rest.

Do Frogs Drink?

No; not in the way that we do. They require much moisture, but absorb it by means of the skin. And, of course, their food is very moist.

Will a Cat Die if it Eats Beetles?

Not if the beetles are not poisonous. Some cats snap up cockroaches with apparent enjoyment, while others will not touch them.

Are Ostrich Feathers Obtained by Cruel Methods?

No; the feather is cut through the insensitive shank, and this, when ready to be cast at the ordinary moult, is painlessly removed.

How Can the Grey Ring Round a Canary's Neck be Removed?

It cannot be done. The marking shows that the blood of the linnet or goldfinch or other bird runs in the canary's veins.

How Long will a Captive Bullfinch Live?

Nature intended all the finch tribe to enjoy about 15 years' existence, but cage life, with its lack of exercise and unskilful feeding, is very uncertain.

Does a Guinea-pig Overfeed if Given Plenty of Food?

No, not if the right sort of food is given, but the writer once lost 11 guinea-pigs in a day through, as he supposes, raw potatoes being given to them in his absence.

Why Do Some Ants Have Wings?

The wings are borne only by the queens and drones for a single day's flight. At the end of the day the queen returns to the nest and bites off her wings; the drones die or are killed.

Do Butterflies Ever Sleep Like Bats?

We have butterflies of which not all, but many members, find snug shelter in which to sleep away the winter. Probably some painted ladies may; the tortoiseshells and peacocks certainly do.

Do House-Flies Grow?

Not after they leave the chrysalis stage. A house generally entertains two or three species of fly of as many sizes. Where two of the same species differ in size we know that the smaller had the poorer food supply during its larval stage.

How Does Water Travel to the Tops of Trees Against Gravity?

Water from the soil, containing organic and mineral matter, has the power to penetrate the rootlets. It is of higher density than the moisture already present, and so can force its way from cell to cell to the topmost twig.

What is the White Mark a Dead Fly Leaves on a Window-Pane?

It is like the verdict of a coroner's jury, telling us that the fly has died from the effects of a parasitic fungus called *Empusa muscoe*. Spores enter the fly's body, mature, kill the fly, and in turn give off other spores—the white halo on the window-pane.

Do Deep Sea Creatures Have Eyes?

In most cases they do, although there is an octopus that lives half-a-mile down without a vestige of an eye. The eyes of deep sea creatures, however, are very strange, some being telescopic, and others at the ends of stalks. An interesting illustrated article on the Dark Kingdoms of the Ocean Bed, dealing with this and other deep-sea matters, is given in the C.N. monthly—My Magazine—for December, now lying on the book-stalls with this paper.

THE CHANGING STARS

CROWDS OF WORLDS RUSHING THROUGH SPACE

Measuring a Light 270 Million Million Miles Away

ECLIPSE OF A GIANT SUN

By Our Astronomical Correspondent

When we look up at the stars everything seems always the same, as if eternally fixed, except for the movements of the Moon and the planets.

In reality, however, nothing is fixed, and not only is every star rushing through space at colossal speed, but each is continually changing. Some thousands of these stars are known to vary periodically, and the time they take to wax and wane is known with great precision, as well as the causes for the change.

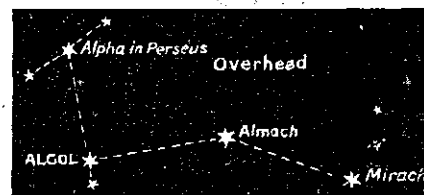
With a very large number of these variable stars—as those whose periods are known and measured are called—the changes are due to great dark worlds that revolve around them, and at regular times eclipse the bright central sun.

Dark World Shuts Off the Light

The variations of nearly all these variable stars are only perceptible to practised eyes with the aid of special instruments, chief of which is the photometer, which measures the varying amount of light with great exactitude. There are, however, a few whose varying light may be seen with the naked eye.

The most famous of these is Algol, to be seen now almost overhead toward the south-east at 8 p.m., and due south by 10 o'clock.

To find it is an easy matter with the aid of the last two C.N. star maps and the present one, for Algol is close to the stars of Andromeda, and if an imaginary



Algol and the chief stars in Perseus

line be drawn from Mirach to Almach and continued for about as far again, and bent slightly downward, it will reach Algol, a star normally about as bright as Almach.

Next week two very convenient opportunities will occur of seeing Algol partly eclipsed, or hidden by the great dark world that revolves round it. This will happen on Tuesday night at about 8 p.m., and again on Friday evening at about 5 o'clock.

In the short interval of 2 days, 20 hours, and 49 minutes this gigantic dark world will have gone round Algol and begun to eclipse it again. If looked at about four hours before or after these times Algol will be seen at its usual brightness, but at mid-eclipse it will be found to have lost quite five-sixths of its light, and to have dwindled to a fourth-magnitude star.

Sun and Its Attendant World

Algol is 2,900,000 times as far away as our Sun. The dark body is about 3,250,000 miles from Algol, and is almost exactly the same size as our Sun, being 840,000 miles in diameter, large enough therefore to contain over a million earths.

Algol has been calculated to be 1,060,000 miles in diameter, and therefore not so very much larger than its great planet, with the result that the dark planet attracts Algol, causing it also to revolve in a smaller circle inside the larger one of the dark planet.

It has been found that the speed at which Algol travels in this smaller circle is nearly twenty-seven miles a second.

Being so close to Algol, this dark world must have a terribly hot time, but it has probably a vast enclosing atmosphere as it is lighter than water. G. F. M.

LOST IN THE TRAIN

The Missing Title-Deeds of Medland School

Told by T. C. Bridges, the C.N. Storyteller

CHAPTER 27

Tight Places

It was in a tight place like this that Dicky's wits got most quickly to work.

"This way, Tom!" he snapped, and, seizing the other by the arm, swung him round the curve of the passage.

By the light of Tom's electric torch they saw a passage stretching away endlessly in front of them, sloping down into the heart of the hill.

Dicky was so quick that they were both round the curve and running hard before Janion was on his legs again.

But their start was not a long one, and next moment they heard the man pounding after them and yelling to them savagely to stop. His language was furious, but they neither of them wasted any time in listening, for their one idea was to put as much space as possible between themselves and Janion.

In spite of the danger they were in Dicky was conscious of a wild feeling of triumph. He had the bag, and he vowed that whatever happened he would not let Janion have it again.

The passage widened, and by the light of Tom's electric torch Dicky could see that they were in a regular cave.

The roof, hung with shining stalactites, was a long way overhead, and the walls were almost out of sight. The floor, very uneven and littered with lumps of rock and curious mounds of stalagmite, sloped always downward.

So rough was the going that it was impossible to run very fast, but luckily this told against their pursuer as well as themselves.

Another point in their favour was that they had light and Janion had none. He had not had time to relight his candle, and he was chasing them by the gleam of Tom's torch.

This was not a wise proceeding on his part, and it was not long before he paid for his folly. They heard him trip and come down a fearful crash, and for a moment Dicky pulled up, hoping that the man was out of it.

But in this he was disappointed, for, fairly bellowing with rage and pain, Janion got to his feet again and came charging after them.

"Drop that bag! Drop it, or I'll break every bone in your body!" he yelled; and the echoes caught his voice, and from every side came weird threats, "Every bone—every bone—every bone!"

It was horribly uncanny, but the boys were too busy trying to get away to pay any attention.

"Where are we going?" panted Tom, as he sprang across a pool of black water set in a little hollow in the floor of the cave.

"Don't know. Perhaps we can dodge him," answered Dicky breathlessly.

Tom lifted his light a little, and both saw that they were coming to the end of the cave. The roof was dropping right down to the floor, and the stalactites, meeting the floor, made a forest of pillars.

Dicky's heart sank. It looked as if they were absolutely trapped, and if they were forced to turn to bay they had no weapon—not so much as a stick—against Janion. Yet there was nothing for it but to keep on and trust to finding some passage or hiding-place.

Once more luck was kind to them, for suddenly the white beam of the torch showed the mouth of a low-roofed passage dead ahead.

They reached it, and flung themselves into it; but Janion was close enough to see where they had gone, and they heard him give a yell of savage triumph.

"He must know something. Perhaps it's a blind alley," was

Dicky's thought; but for Tom's sake he said nothing.

This passage was much wider than the outer one, but also much lower, and presently the roof came down so low that they had to bend almost double.

It curved, and as they came round the bend Dicky gave a gasp of despair.

What he had feared was only too true. The passage shut down into a mere crack, looking no wider than the space between two bookshelves.

"He's got us," he murmured despairingly.

CHAPTER 28

The Great Smoke Trick

Low as Dicky's voice was Tom heard.

"Not yet," he said doggedly. "We're smaller than Janion, and we can get farther in than he can. Get down on your hands and knees, Dicky. Crawl!"

There are few things less pleasant than to wedge yourself between two surfaces of solid rock that are not more than a couple of feet apart, especially when both are rougher than the coarsest sandpaper. It is worse still when you are in the heart of an unknown cave, in blackness and gloom, lit only by the feeble ray of a small torch.

But anything was better than falling into the hands of Janion, and, regardless of scratches and bruises, the two went wriggling and squirming forward until there was no longer room even to crawl, and they were almost flat on their faces. Then, being unable to get any farther, they were bound to stop.

In the black darkness behind them they heard Janion's heavy breathing, and presently there was the scratch of a match and a gleam of light. Janion had lit a candle, and was holding it at arm's length into the recess. They heard him chuckle, and it was a sound that did not make either of them happier. The note of triumph in it was only too plain.

"I got ye now!" he said triumphantly; and, lying flat on his face, reached in to seize them.

But the boys had drawn themselves up as closely as possible, and Janion's groping fingers were still a foot or two from their toes.

And, wriggle as he might, he could not get at them, for he was much too thick and bulky to squeeze into the space where they had found refuge.

Dicky began to feel a little happier. True, there was not much to feel happy about, for Janion was between them and safety, and Dicky was not sure how long he could stand the cramps which were already beginning to tingle all over him. Yet it was something that Janion could not reach him or Tom, and he began to wonder if they could not make some sort of bargain with the man.

But before he could make up his mind what to say Janion's voice came again.

"Think you're safe, do you?" he sneered. "You just wait a bit."

He laughed again, a harsh cackling laugh, which grated unpleasantly on Dicky's ears.

Dicky felt more nervous than ever, and with great difficulty wriggled round so that he could get a sight of the man. Janion, he saw, had retreated a little to a place where the roof was high enough for him to sit fairly comfortably. He had fixed his candle on a piece of rock, and Dicky could see that he was taking an old newspaper out of his pocket.

This he crumpled up into a ball, then, taking a bottle from another pocket, poured some of its contents on the paper. The liquid looked like oil.

All of a sudden Dicky understood. The man was going to set fire to the oily paper and smoke them out.

For a moment Dicky felt almost sick with fright. In a confined space like this it would not take much smoke to make the air unbreathable. He and Tom would be blinded and choked. He twisted himself round again, meaning to tell Tom of Janion's abominable plan.

But Tom was no longer there!

CHAPTER 29

Boxed!

For the moment Dicky was paralysed with amazement. He could scarcely believe his eyes. Not only Tom, but his torch also, was gone. The only light came from a match which Janion had just struck.

Suddenly he heard a rustling, scratching sound, which seemed to come from some little distance to his right; then Tom's voice in the merest whisper:

"This way, Dicky! Come this way. Quickly!"

Dicky set to crawling again, and found that, though it had been impossible to go any farther straight ahead, he could manage to work along sideways. There was one place where floor and roof were so close that he could only squeeze past, but beyond this he suddenly found much more room.

Next moment, with a gasp of deepest relief, he quickened his pace and bumped into Tom.

"Steady!" whispered Tom in his ear. "I believe there's a way through from here into another cave."

"Why do you think so?"

"Because there's a draught. Can't you feel it?"

"I do believe I can. Hadn't you better turn on the light so that we can see it?"

"Wait a moment. We can go ahead a bit in the dark, and I don't want Janion to spot us if we can help it."

"We'd better be quick. He's going to smoke us out."

"I thought that was what he was after," replied Tom. "Hulloa! He's started!"

As Tom spoke there was a glare of smoky light behind them, and at once a reek of oily vapour came pouring past them. It stung Dicky's eyes and throat, but he managed not to cough, and, keeping close enough to Tom to touch him, wriggled steadily onward. There was just room to pass, and no more.

And now there was no doubt about the draught. It was blowing quite plainly in their faces, and as

each yard of progress took them farther away from the burning paper the smoke became less troublesome.

Presently Dicky raised his hand, and found he could only just touch the roof. His spirits rose with a bound.

"We're all right, Tom. We have heaps of room here. Switch the light on again."

Tom did so, and Dicky could have shouted with joy when he saw that in front the roof rose steadily until its sweep was lost in the darkness.

"We're in another cave," he exclaimed. "Why, there's almost room to stand up!"

"Thought I was right," said Tom, with much satisfaction. "Strikes me we've settled Janion's hash, anyhow."

"Look out! He's coming through!" said Dicky, in a scared voice.

He was right. Janion had just discovered the escape of the two boys, and in a fury of rage had flung himself head foremost into the crack, and was desperately endeavouring to force his way through.

"Come on!" said Dicky, urgently, catching Tom by the arm.

But Tom stood still, holding his light so that he could watch Janion.

"He's all right, Dicky," he answered. "He can't get through, and if he tries much harder he'll probably stick fast, and stay there for good."

As he spoke he held up his torch, so that the light fell full on Janion, and it looked as if his prophecy were going to prove a true one.

Janion had got to the very narrowest part of the crack, and had wedged himself so tightly that it really seemed as if he could go neither backwards nor forwards. He was wriggling like a toad under a harrow, and making a noise like a broken-winded horse.

"Enjoying yourself?" asked Tom, sarcastically.

Janion heard and glared at him, but he did not answer. The actual fact was that he had not breath left to do so.

"What a pity we can't photo him!" went on Tom, with a grin. "He'd make a really pretty picture."

Janion was fairly foaming, but now even he realised that the boys were out of his reach.

He began to try to work back, but in his rage he had worked himself so tightly between the two surfaces of rough rock that it was almost impossible for him to move at all. Indeed, if he had not managed to get a hold with one hand upon a little projecting knob of stalactite he would never have got himself out at all. But this helped him, and at last, with most of his buttons off his waistcoat and his clothes split in every direction, he did win free.

The last thing the boys saw of him was his face purple with exertion and dripping with perspiration, and wearing an indescribable look of baffled fury.

He shook his great fist.

"All right, you brats!" he growled. "I can't reach you, but there's one thing as maybe you've forgot. You can't get out any way but this. And here I stays and waits for you—I don't care if it's a year!"

Tom slowly turned, and for once there was real dismay on his square, stolid face, as he stared open-eyed at his chum.

"I say, Dicky," he said slowly "the beggar's right. We're properly boxed here, and if he sticks to what he says we're done."

Dicky looked all around. Behind them was the passage sloping steeply into unknown depths of rock. It looked as if it might dip into the very centre of the earth. In front was the narrow space through which they had crawled, and Janion was behind that space. The man was right. They were boxed with a vengeance.

TO BE CONTINUED

Who Was He?

Hero of Many Lands

In the middle of the 18th century there was born in one of the eastern countries of Europe a boy who was educated at a military school in the capital, and so distinguished himself there that the State paid for him to travel abroad to complete his education.

He visited France, where he remained for some years, and later on he accompanied Lafayette to America, and, enlisting in the American army, became a general.

Washington made him his adjutant, and Congress publicly thanked him for his splendid service to their cause.

Returning to his own country, he was made a major-general there and fought for his fatherland; but when his king submitted to the enemy he resigned and went abroad again.

Meanwhile the French Revolution had broken out, and this soldier went to Paris to enlist the help of the new government on behalf of his country, now in the enemy's hands. Promises were given without help, but a revolt against the national foe having broken out, he hastened to his country and took command of the patriot army, which he led to victory.

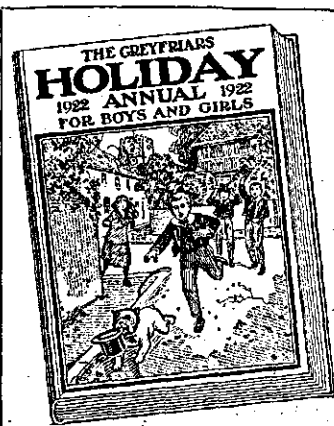
Other foes arose, however, and he was defeated by the combined army of the great Powers, which was nearly double the size of his own. For two months he defended his capital with great skill, but large hostile armies were gathered, and in a fierce battle he was defeated, severely wounded, and taken prisoner.

He remained a prisoner for a year or two, and then, being released, again went to America. Returning to Europe he saw Napoleon, who more than once offered him high rank in his army; but the patriot could get no promise of help for his country from the French emperor, and he therefore declined the offers he received, and lived quietly as an exile in France.

When, after Napoleon's downfall, the allied armies invaded France the exile saw a regiment of his countrymen looting, and, rushing among them, he cried out, "When I commanded brave soldiers they never pillaged, and I should have punished severely the officers who allowed such disorders as I now see!"

"Who are you that dare to speak with such boldness?" inquired the officers; and when the patriot mentioned his name the soldiers stopped their looting, and threw dust on their heads as a symbol of repentance.

The patriot would never return to see his fatherland ruled by aliens, and he retired to Switzerland, where he died through a fall from a horse. An English poet said that Freedom shrieked when he fell. Here is his portrait. Who was he?



The Ideal Gift Book

for boys and girls at school. COLOURED pictures and photograph plates. Long, complete stories of school and adventure, and many short tales, tricks, games, puzzles, hints on hobbies, etc.

Price 6/-

Be Good, Sweet Child, and Let Who Will be Clever

DI MERRYMAN

A CERTAIN doctor had a reputation for being methodical. Two mutual friends were discussing this trait of the doctor's, and one of them said: "Yes, and when he's unwell he prescribes for himself; then he takes a pound note out of one pocket and carefully places it in another."

Tea-time

THERE was a young lady of Lea
Who went for a sail on the sea,
But she got such a shock
When she bumped on a rock
That she hurried back home to
her tea.

Is Your Name Benbow?

THIS was, of course, originally Bend-bow, and was no doubt given as a descriptive name to some man who had great skill in archery. Then the name was attached to his family and descended as a surname.

WHY is it difficult for sailors to work on a two-masted ship? Because no man can serve two masters well.

The Broken Type

THESE mysterious-looking hieroglyphics do not seem to convey much, but actually they represent a

well-known proverb that was set in type, and then chipped, in the printer's absence, by a mischievous apprentice.

Can you fit in the chipped parts to read sense? *Solution next week*

In These Hard Times

PESSIMIST: "I don't know how one can be expected to meet all these expenses."

Optimist: "Oh, that's easy enough! One meets them every time one turns round."



Adventures of Augustus & Marmaduke

MR. TIMS was sleeping in his deck-chair in the park. Augustus said to Marmaduke, "Let's have a jolly lark."

Behind those bushes we will hide, and our pea-shooters take, and shoot at that old gentleman, and run when he's awake."

"Dear me, dear me!" said Mr. Tims, "I felt some spots of rain, or something like it; bless my heart, why there it is again!"

Just then he saw behind the bushes Marmaduke and Gus, so crept around behind them without making any fuss.

He tied young Gus and Marmaduke quite tightly to a tree and left them both there struggling hard in order to get free.

Transposition

A PLAYFUL animal when young,
If rightly you transpose,
Will form a portion of our food,
As everybody knows.

Solution next week

His Good Deeds



OLD lady: "And so you do a good deed every day, do you?"
Scout: "Yes, mum, I do. Yesterday I visited my aunt, and she was very glad. Today I came home, and she was very glad again."

The Worker

HE worked by day
And toiled by night,
He gave up play
And all delight.
Dry books he read
New things to learn,
And forged ahead
Success to earn.
He plodded on
With faith and pluck,
And when he won
Men called it luck.

WHEN are we all artists?
When we draw long faces.

What Happened Then?

WALKING round the works the new foreman came across two workmen having a smoke and a rest in a quiet corner.

Not having seen him before, one of the men asked:
"Hallo! What are you doing here?"

"I'm Dodgen, the new foreman," he replied.

"So are we; come and have a smoke," said both the slackers.

Arithmetical Puzzle

WHAT three numbers do I mean
Which placed together make
nineteen?

From which we take the fourth of
four
And there remains an even score?

Solution next week

WHICH county in England is
most cut up?
Rutland.

The Life of a Man

How does the average man spend his time?

It has been calculated that the man of fifty has, on the average, spent time equal to 6000 days in slumber. He has worked for about 5500 days, has passed 4000 days in sports and other pleasures, given 1500 days to eating, and 800 days to walking, while illness has claimed 500 days of his life.

ANSWERS TO LAST WEEK'S PUZZLES

Transposition Grape, pear, pea, ape

The Village School

There were 66 pupils

What Birds Are These?

Hen harrier and kite

Jacko Is a Good Lad

THE family had had just about enough of it. Even Jacko, who had begun by thinking house-hunting fine sport, was sick of trailing the family's possessions along damp streets and was only waiting for a convenient opportunity to clear off.

Adolphus had cleared off hours before, to "beg a bed of the first pal he met." He went off saying that if they had any sense they would go straight to Belinda's.

But Belinda had only a couch to offer them, and that would leave Father and Jacko still to provide for.

It was a great problem, and Mother Jacko brought matters to a head by suddenly flopping down on a doorstep and refusing to go another yard.

When Mother gave way things were desperate indeed.

"Come along, my dear," urged Father. "It's not far."

Mother Jacko burst into tears.

"I don't want to go to Belinda's!" she cried. "I won't leave you. We've never been separated before. And where will you go?"

"Don't you worry!" said Father. "I'll find a shakedown!"

"I don't know where," said Mother, wiping her eyes. "And then there's Jacko—why, where is the boy?"

At that moment Jacko appeared from nowhere, took a flying leap over his mother's head, and landed at her feet.

"Cheer up, Mater!" he cried. "Are we down-hearted? NO!"

"Be still!" ordered his father. "Your mother's upset."

But Jacko continued to grin cheerfully.

"Got a house!" he announced. "Immediate possession; no



Father pushed and Jacko pulled

rent. Give me a match, and you shall have a fire in the kitchen grate before you can wink."

The family stared at him. "What does the boy mean?" they asked.

Jacko jumped up and pointed to the house they were sitting under. *It was empty!*

While they watched, Jacko climbed on to the stone ledge of one of the lower windows and disappeared inside.

In a minute he came back.

"Come on!" he shouted, poking his head out.

"I c-can't get up there," said his mother, who was too tired and dazed to raise any serious objection.

"Yes, you can!" shouted Jacko. "Give her a hand, Dad!"

But Mother wouldn't leave till Baby was safely inside; and then, with Jacko pulling from within and Father pushing from without, she found herself at last once again within four walls.

Jacko, as good as his word, soon had a fire crackling on the hearth—where he found the coal nobody thought to ask—and in less than no time there they were, their things all about them, warm and comfortable and as cheerful as crickets.

It was only when Mother Jacko was tucking the Baby up in bed, long after, that she suddenly turned and said: "What ever made you think of such a thing, Jacko? I don't believe it's honest!"

"Bosh!" said Father Jacko. "We'll talk about that tomorrow! Jacko's a good lad—sometimes!"

Ici on Parle Français



La plaque Un aviateur La lame
Il porte la plaque de son régiment
L'aviateur survole la campagne
La lame du couteau est en acier



La jétée Un élan La bobine
Nous nous promènerons sur la jétée
L'élan habite les pays du nord
La bobine est couverte de fil

Notes and Queries

What is an Ecologist? One who studies the relationship of animals and plants to one another and to the other world.

What is an Intransigent? An extreme radical who will not compromise. It comes from two French words meaning not to agree.

What is a Martello Tower? A small fort with a single cannon, of which many were built on the south coast of England during Napoleon's time. Martello is Italian for hammer, and the name was first given, in the 16th century, to Sicilian towers, in which a hammer struck a bell to warn people of pirates.

Tales Before Bedtime

The Dark Wood

THERE was once a little girl who ran out of the house with her skipping-rope, and skipped on and on till she lost herself.

She was quite near home all the time if only she could have found the way back.

But between her home and the great field where she found herself was a thick wood. She had skipped along through a path in the wood without noticing the way, and when she wanted to go back she could not find it.

Of course, there were many paths and many ways, but they all looked alike from the other side, and Ellie dare not venture.

It was so dark and still and terrifying to a little stranger who had only just come there to live.

It seemed strange, too, that there should be nobody about in the fields. As it happened, it was lunch-time, and the farm people had all gone in.

But Ellie didn't know that. It was very lonely, and the more she stood and stared at the dark wood the less she wanted to go into it.

And yet she couldn't stay there all day. They would be getting anxious about her at home, and it might be hours before they thought to search the wood.

As she stood wondering what to do, something suddenly sprang up at her and caught at her frock.

"She cried out in terror, and then, as she looked down, she began to smile.

It was only a kitten—a little fluffy, white kitten, such a pretty one!

"Oh, Pussy," she cried,



She skipped and skipped

"you did give me a fright!"

The kitten mewed and turned round, and sprang into the wood.

Ellie darted after it. She was no longer afraid, for now she had a friend.

On and on ran the kitten, and on and on ran Ellie, till in a very few minutes the dark wood grew light, and they were out on the high-road again.

The white kitten is Ellie's now, and fine times they have together.

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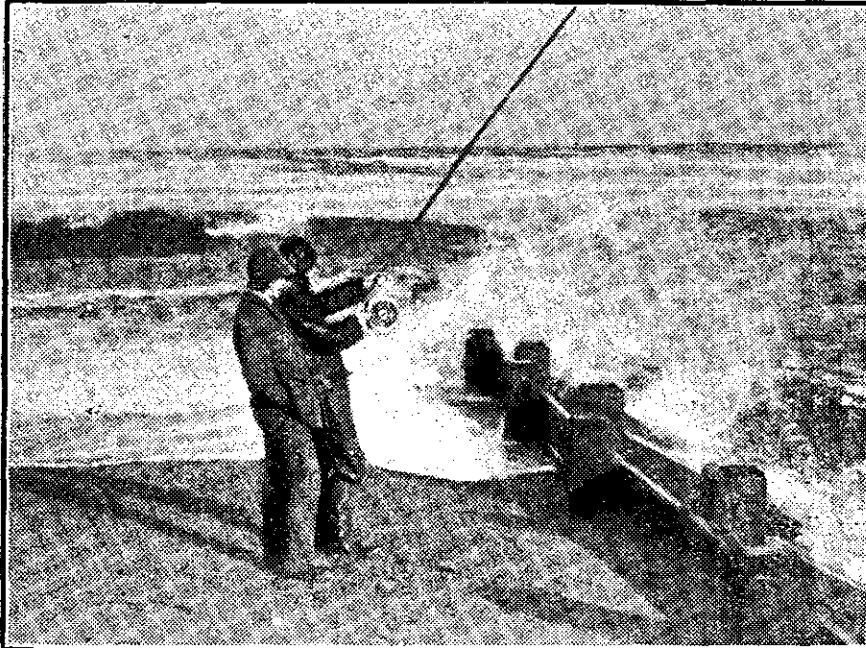
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PACK MULE IN WALES · WATCH DOGS AT THE ZOO · BIGGEST LINERS MEET



A Keen Angler—The heavy gales and cutting winds of approaching winter hold no terrors for enthusiastic anglers on our coasts, and here we see a disciple of Izak Walton at Withernsea, in Yorkshire, facing the storm as he throws his line into the sea



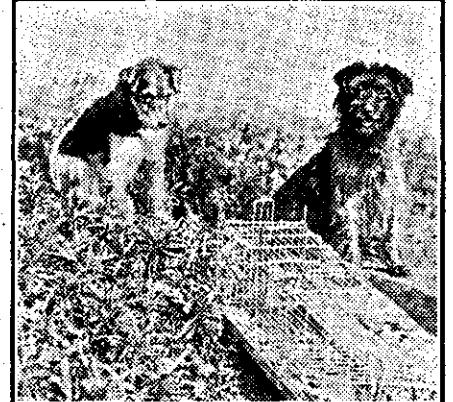
Christmas Geese from Poland—A little worker feeding some of the 2500 geese that recently arrived in England from Poland for the Christmas markets. The birds appear to be in a fine, healthy condition. Enormous numbers of geese are reared for export in this part of Europe



Firemen at Play—The Tokio fire brigade goes through a strenuous training, in which climbing plays a large part. Here we see the firemen giving a display on their escape ladders



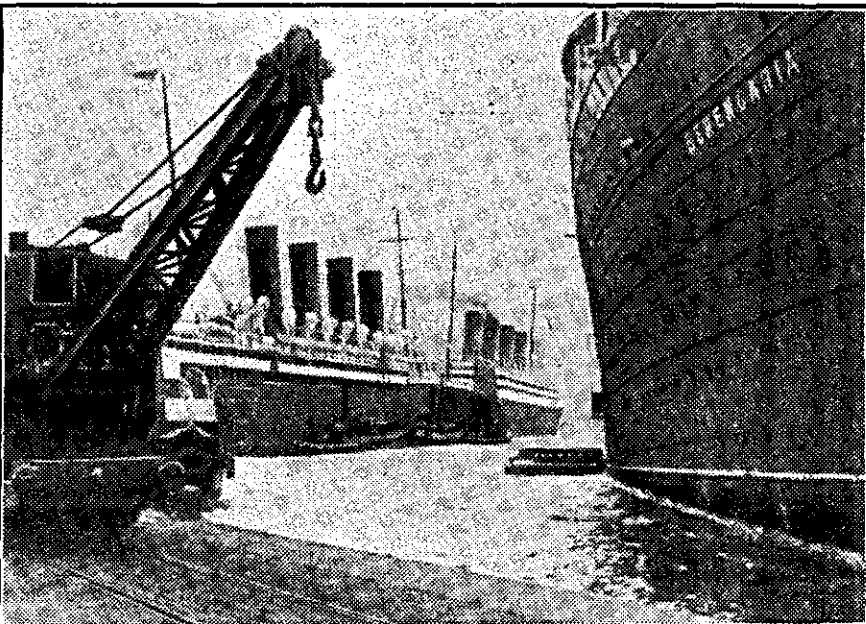
Pack-Mule Transport in Wales—There is much discussion nowadays about bringing our transport system up to date, but in one part of the kingdom, at any rate, the pack mule will have to remain. This is at Llanymynech, in North Wales, where coal is conveyed to the cottages by mule, travelling on a bridle track, as shown here



Watch Dogs at the Zoo—Spider and Rough, two trained dogs at the London Zoo, which catch rats and round up escaped animals



A Handful of Crocodiles—The half-dozen young crocodiles shown in this picture are from South America, and are being brought up in London. At present they are quite harmless



Three Giants Meet—Three of the largest liners in the world have just met at Southampton, as shown in this picture, the Olympic, Mauretania, and Berengaria, or Imperator, as it was called when it was German, all being in harbour at the same time



The Potter Moulds the Clay—A pottery class for school children conducted in a London cellar by the Kensington Council of Social Service. A lady artist is here seen instructing the children in the art of mixing the clay before shaping the pots